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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LEE, TOMMY D

ART UNIT

PAPER NUMBER

2624

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15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/255,987

Applicant(s)

YOSHIMURA, TOMONARI

Examiner

Thomas D. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-16 and 18-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-15 is/are allowed.
- 6) ☒ Claim(s) 1-7, 10, 16, 18, 19, 21-23 and 26 is/are rejected.
- 7) ☒ Claim(s) 8, 9, 20, 24 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response

1. This Office action is responsive to applicant's RESPONSE UNDER 37 CFR 1.111, filed July 7, 2003. Claims 1-10, 12-16 and 18-26 are pending.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1, 10, 16 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 5,726,778 (Tanio).

Regarding device claims 1 and 10, and method claim 21 corresponding to device claim 1, Tanio teaches an image correction device (image processing apparatus with color-space conversion; note title of patent) for use in an image forming system (I/F device 101) which is connectable to a plurality of image readers and a plurality of image forming apparatuses (film scanners 109, 110; color copying apparatuses 103, 104 (column 3, line 44 – column 4, line 12), the image correction device comprising: a discriminating device for discriminating an image reader and an image forming apparatus which are connected to the image correction device (device type recognized (step S40, note Fig. 10), judge output device type (step S50); column 11, lines 12-24); memory means for storing correction data relating to combinations of the image reader and image forming apparatus (color conversion tables (Fig. 14)); and data correction means for correcting image data output from an image reader using the correction data relating to a specific combination of image reader and image forming apparatus and for

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outputting the corrected data to an image forming apparatus (color conversion circuit 304 (Fig. 2B); column 11, lines 24-37). The device is a data processing device (note title of patent).

Claim 16 recites a storage medium for storing program software for performing the steps recited in claim 21, respectively. Tanio teaches this limitation (column 9, line 8, column 10, line 4).

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanio.

Tanio does not explicitly state that a plurality of image forming apparatuses are connected to a single image reader, or that a plurality of image readers are connected to a single image forming apparatus. However, Tanio does show conversion tables that are set for different combinations of image input and output devices (note Fig. 14). It would have been obvious for one of ordinary skill in the art that as long as there is a conversion table corresponding to different combinations of input and output devices, the number of input devices and output devices which are connected to the image processing apparatus taught by Tanio is arbitrary, and thus providing a plurality of image forming apparatuses and a single image reader, or providing a plurality of image readers and a single image forming apparatus, would have been an obvious modification of Tanio for one of ordinary skill in the art.

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6. Claims 4-6, 18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanio as applied to either claim 1, claim 16 or claim 21 above, and further in view of U.S. Patent 5,717,839 (Ichikawa).

Regarding claims 4 and 6, Tanio does not teach correction data for color printing including various combinations of gradient correction data, resolution data, density correction data and color correction data. This limitation is taught by Ichikawa (column 7, lines 19-25). Ichikawa further teaches correction of image data from the image reader based on updated correction data stored in the memory means, and outputting the corrected data to the image forming apparatus (correction data selected by user in manual mode (column 10, lines 35-57)). By providing correction data in such a manner where more than just the color space correction is performed, the appearance of the resulting output image is enhanced, and the image may be further enhanced when different combinations of correction data are used, as well as when correction data is updated. Thus, it would have been obvious for one of ordinary skill in the art to modify the teaching of Tanio by providing more types and different combinations of color correction, and well as a means for updating the correction data, such as taught by Ichikawa. Claims 18 and 22, which are program software and method claims, respectively, corresponding to device claim 6, are rejected for the same reasons.

Regarding claim 5, neither Tanio nor Ichikawa teach correction data for monochrome printing. However, monochrome printing is well known in the art, and one of ordinary skill in the art would have known, given the teachings of Tanio and Ichikawa, and the knowledge that the desire to enhance the appearance of image data is not

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limited to the enhancement of color images, that data correction for monochrome printing may be implemented in the same manner, so that correction may be achieved for these images as well.

7. Claims 7, 19 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanio as applied to claims 1, 16 or 21 above, and further in view of U.S. Patent 6,178,007 (Harrington).

Tanio does not teach means for requesting regeneration of the correction data to update the correction data stored in the memory means when a set time interval has elapsed after the last update of the correction data, as recited in claim 7 and similarly recited in claims 19 and 23. Harrington teaches this limitation (color look-up table automatically updated periodically (column 5, lines 29-41; column 6, lines 52-63). It would have been obvious for one of ordinary skill in the art to modify the teaching of Tanio by providing a means for periodic, automatic updated of correction data, as taught by Harrington, so that printers connected to the image processor may be constantly adjusted without human intervention (column 5, lines 12-15).

8. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanio as applied to claim 1 above, and further in view of U.S. Patent 5,760,913 (Falk).

Tanio does not teach means for generating correction data by comparing first image data with second image data, wherein the first image data is stored in the memory and outputted to the image forming apparatus and the second image data is created with the image reader by reading the image formed with the image forming apparatus based on the first image data. Falk teaches this limitation (data file printed by

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printer thereby generating calibration image, which is then scanned using a scanner, and the scanned image is compared with the data file (Abstract)). Thus, when combined with the teaching of Tanio, image data may be calibrated to match color characteristics of a printer in a simple manner, no matter which combination of input and output devices are used. Therefore, it would have been obvious for one of ordinary skill in the art to modify the teaching of Tanio by providing means for generating correction data such as taught by Falk.

Allowable Subject Matter

9. Claims 12-15 are allowed.
10. Claims 8, 9, 20, 24 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
11. The following is a statement of reasons for the indication of allowable subject matter: The cited prior art references do not teach or suggest connection of an image correction device with plural image readers and image forming apparatuses over a network, in combination with discriminating, memory and data correction means as recited in base claim 12, or means for searching and use of correction data relating a first combination of image reader and image forming apparatus having the most similar characteristics to a second combination of image reader and image forming apparatus that does not have correction data stored in memory means, as recited in claims 8, 9, 20, 24 and 25.

Response to Arguments

12. Applicant's arguments filed in response to the rejection of the above claims have been fully considered but they are not persuasive.

Applicant asserts that Tanio does not teach a structure that is the same or equivalent to applicant's disclosed correction means. Specifically, applicant states that Tanio must find independently the input LUT, the output LUT and the conversion table between the two LUTs of that combination, and merge them together to perform the conversion, while the claimed image correction device finds just one table, thereby performing a much quicker and simpler operation. However, the data correction means, as recited in the claims, does not limit the number of conversion tables which are used to perform the conversion.

Applicant further states that Tanio teaches away from generating a single LUT that corresponds to the whole input to output path. Once again, the data correction means, as recited in the claims, does not limit the number of LUTs used to perform the conversion to one.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas D. Lee whose telephone number is (703) 305-4870. The examiner can normally be reached on Monday-Friday (7:30-5:00), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (703) 308-7452. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Thomas D. Lee
Primary Examiner
Art Unit 2624

tdl
September 17, 2003